10/892640

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PATENT
Attorney Docket No. 09404.0006-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent No.: 7,232,907 B2)
)
Inventors: John D. HAYLER *et al.*)
)
Issue Date: June 19, 2007)
)
For: PROCESS FOR PRODUCTION OF NAPHTHYRIDINE-3-CARBOXYLIC ACID DERIVATIVES)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

REQUEST FOR CERTIFICATE OF CORRECTION

Pursuant to 35 U.S.C. § 254, and 37 C.F.R. § 1.322, this is a request for a Certificate of Correction in the above-identified patent. The mistakes identified in the appended Form PTO 1050 occurred either through the fault of the U.S. Patent and Trademark Office, as clearly disclosed by the records of the application which matured into this patent. Specifically, the error was introduced in the Examiner's Amendment entered February 21, 2007. Documents supporting the correction are attached as Exhibits A, B, and C. Two (2) copies of the Form PTO 1050 are appended.

The complete Certificate of Correction involves one (1) page. Issuance of the Certificate of Correction containing the correction is earnestly requested.

Should any fees be needed, authorization is hereby given to charge any fees due in connection with the filing of this request to Deposit Account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: July 20, 2007

By: _____
Steven P. O'Connor
Reg. No. 41,225
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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. 7,232,907 B2 Page 1 of 1

APPLICATION NO.: 10/692,640

ISSUE DATE: June 19, 2007

INVENTORS: John D. Hayler, Hoon Choi, and Sungwook Cho

It is hereby certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the title page, item (63), line 2, "Sep. 1, 1999" should read --Sep. 1, 2000--.

Column 1, line 10, "Sep. 1, 1999" should read --Sep. 1, 2000--.

MAILING ADDRESS OF SENDER

Finnegan, Henderson, Farabow,
Garrett & Dunner, L.L.P.
901 New York Avenue, N.W.
Washington, D.C. 20001-4413

"EXPRESS MAIL CERTIFICATE"
"EXPRESS MAIL" MAILING LABEL NUMBER EL981256670US
DATE OF DEPOSIT October 24, 2003

Applicant	:	Cho, et al.
Predecessor Application No.	:	10/070,281
Predecessor File Date	:	May 21, 2002
Title	:	PROCESS FOR PRODUCTION OF NAPHTHYRIDINE-3-CARBOXYLIC ACID DERIVATIVES
Examiner	:	B. I. Dentz
Docket No.	:	P32411C1

Box Patent Applications
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

Dear Sir:

The above-captioned application is a continuation of 10/070,281, filed May 21, 2002. Preliminary to calculating filing fees and examining this application please amend the application as follows.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper.

Remarks/Arguments begin on page 8 of this paper.

Amendments to the Specification

- Please add the priority information paragraph to the specification by inserting the following new paragraph before the first line of the specification:

This application claims the benefit of U.S. Application No. 10/070,281, filed May 21, 2002, which is a National Stage 371 of PCT/GB00/03366, filed September 1, 2000, which claims priority to GB 9920917.3, filed September 3, 1999.

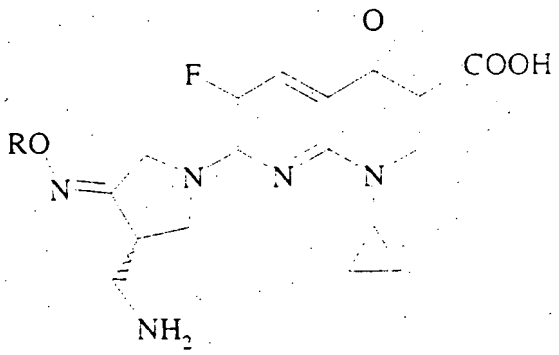
- An Abstract on a separate sheet is attached as required under 37 CFR 1.72(b). Please insert the attached abstract, following the claims.

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

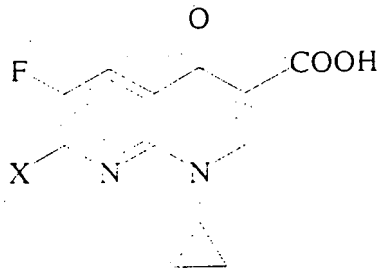
Listing of Claims:

1. (currently amended) A process for the production of a compound of formula (I), or a pharmaceutically acceptable salt and/or hydrate thereof:



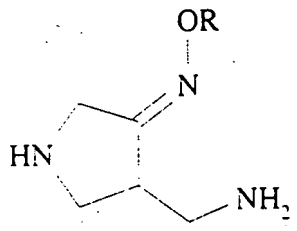
(I)

wherein R is C_{1-4} alkyl or C_{1-4} haloalkyl, which comprises reaction of a compound of formula (II):



(II)

wherein X is a leaving group; with a compound of formula (III):



(III)

wherein R is as defined for formula (I), or a salt thereof;

in the presence of a base and an aqueous solvent, wherein the solvent is water;

and optionally forming a pharmaceutically acceptable salt and/or hydrate thereof.

Claims 2-11 (Canceled)

12. (new) The process according to claim 1 wherein 10 volumes of solvent based on the compound of formula (II) are used.

13. (new) The process according to claim 1 wherein between 1.01 and 1.08 mole equivalents of the compound of formula (III) based on the compound of formula (II) are used.

14. (new) The process according to claim 1 performed at a temperature between ambient and about 60°C.

15. (new) The process according to claim 1 wherein the base is triethylamine, diisopropylamine, pyridine, N,N-dimethylaniline, N,N-dimethylaminopyridine, 1,8-diazabicyclo[5.4.0]undec-7-ene, 1,4-diazabicyclo[2.2.2]octane, or a tetraC_{1-6}alkylammonium hydroxide.

16. (new) The process according to claim 1 wherein the base is triethylamine or a tetraC_{1-6}alkylammonium hydroxide.

17. (new) The process according to claim 1 wherein the base is triethylamine.

18. (new) The process according to claim 1 wherein between 3.2 and 3.8 mole equivalents of base is used based on the compound of formula (II), and wherein the compound of formula (III) is in the form of the dimethanesulfonate salt, the hydrochloride salt, the trifluoroacetate salt, or the sulfate salt.

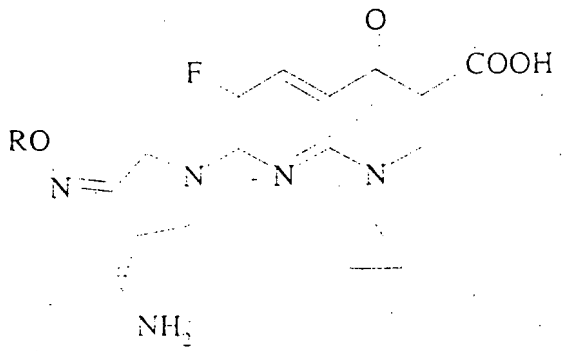
19. (new) The process according to claim 1 wherein X is chloro.

20. (new) The process according to claim 1 wherein the compound of formula (III) is 4-aminomethyl-3-methoxyiminopyrrolidinium dimethanesulfonate.

21. (new) The process according to claim 1 wherein R is C_1 alkyl.

22. (new) The process according to claim 1 wherein the compound of formula (I) is (R,S)-7-(3-aminomethyl-4-*syn*-methoxyimino-pyrrolidin-1-yl)-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-1,8-naphthyridine-3-carboxylic acid methanesulfonate or a hydrate thereof.

23. (new) A process for the production of a compound of formula (I), or a pharmaceutically acceptable salt and/or hydrate thereof:



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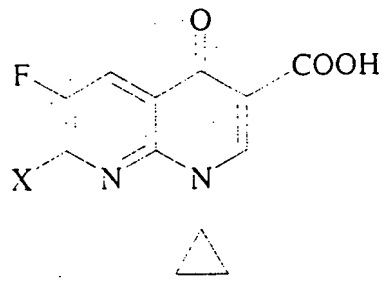
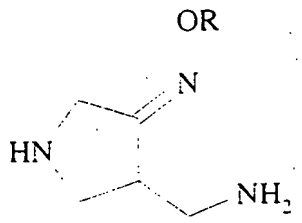
(I)

wherein R is C_{1-4} alkyl or C_{1-4} haloalkyl, which comprises reaction of a compound of formula (II):



(II)

wherein X is a leaving group; with a compound of formula (III):



(III)

wherein R is as defined for formula (I), or a salt thereof;

in the presence of a base and an aqueous solvent; wherein the base is triethylamine, diisopropylamine, or a tetraC_{1-6}alkylammonium hydroxide;

and optionally forming a pharmaceutically acceptable salt and/or hydrate thereof.

24. (new) The process according to claim 23 wherein the base is triethylamine or a tetraC_{1-6}alkylammonium hydroxide.

25. (new) The process according to claim 23 wherein the base is triethylamine.

26. (new) The process according to claim 23 wherein the base is tetrabutylammonium hydroxide or tetramethylammonium hydroxide.

27. (new) The process according to claim 23 wherein the solvent is aqueous acetonitrile, an aqueous alcohol or water.

28. (new) The process according to claim 23 wherein when the solvent is aqueous acetonitrile a ratio of between 0.7 and 1.4 acetonitrile:water is used.

29. (new) The process according to claim 23 wherein the compound of formula (III) is 4-aminomethyl-3-methoxyiminopyrrolidinium dimethanesulfonate.

30. (new) The process according to claim 23 wherein R is C_1 alkyl.

31. (new) The process according to claim 23 wherein the compound of formula (I) is (R,S)-7-(3-aminomethyl-4-*syn*-methoxyimino-pyrrolidin-1-yl)-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-1,8-naphthyridine-3-carboxylic acid methanesulfonate or a hydrate thereof.

REMARKS

Upon entry of this amendment, claims 1 and 12-31 will be pending in the application. Claim 1 has been amended.

Support for this preliminary amendment is found in the claims as originally filed, and in the specification at page 2, lines 19-21, page 3, lines 4-12 and 20-23, and page 4, lines 10-14. No new matter is being added.

The Applicants reserve the right to prosecute, in this or one or more other patent applications, the claims to non-elected inventions, the claims as originally filed, and any other claims supported by the specification. For example, the Applicants reserve the right to re-instate, or file a divisional or other patent application claiming, any subject matter no longer explicitly included in the amended claims.

If it would facilitate the prosecution of this application, the Examiner is invited to confer with the Applicants undersigned attorney.

Respectfully submitted.

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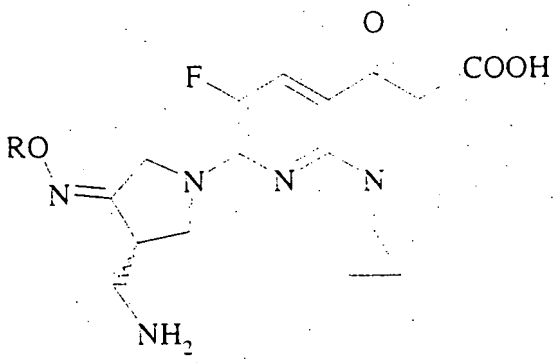
JUL 26 2007

ABSTRACT OF THE DISCLOSURE

A process for the production of Naphthyridine-3-carboxylic acid derivatives of formula (I) having antibacterial activity.



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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY.DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/692,640	10/24/2003	1626	788	9404.0006-01		21	2

CONFIRMATION NO. 8642

UPDATED FILING RECEIPT

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22852
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP
901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

Date Mailed: 05/06/2005

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

Applicant(s)

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Sungwook Cho, Taejon, KOREA, REPUBLIC OF;

Assignment For Published Patent Application

SB Pharmco Puerto Rico Inc.
LG Chem Investment Ltd of the United States Corporation Company

Power of Attorney: The patent practitioners associated with Customer Number **22852**.

Domestic Priority data as claimed by applicant

This application is a CON of 10/070,281 05/21/2002 ABN which is a 371 of PCT/GB00/03366 09/01/2000

MAY 09 2005

Foreign Applications

UNITED KINGDOM 9920917.3 09/03/1999

If Required, Foreign Filing License Granted: 02/03/2004

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US10/692,640

Projected Publication Date: 08/11/2005

JUL 25 2005

Non-Publication Request: No

Early Publication Request: No

Title

Process for production of naphthyridine-3-carboxylic acid derivatives

Preliminary Class

548

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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(74) Agent: **BLAKEY, Alison**; SmithKline Beecham, Two New Horizons Court, Brentford, Middlesex TW8 9EP (GB).

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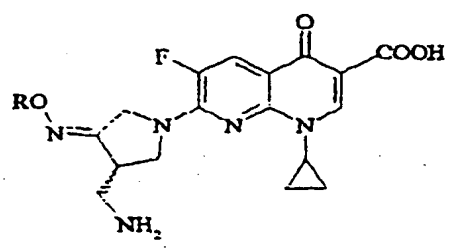
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR PRODUCTION OF NAPHTHYRIDINE-3-CARBOXYLIC ACID DERIVATIVES

(57) Abstract: A process for the production of Naphthyridine-3-carboxylic acid derivatives of formula (I) having antibacterial activity.



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